

DRAFT May 2017

PPCPs (Pharmaceuticals and Personal Care Products): **Diazepam**

Diazepam is a drug that is prescribed to correct the chemical imbalance within the brain. The pharmaceutical is prescribed to treat anxiety disorders, alcohol withdrawal symptoms, or muscle spasms. Diazepam is sometimes used with other medications to treat seizures. Diazepam is listed as a habit-forming (addictive) drug. Common side effects include drowsiness and loss of coordination (Kruidering-Hall and Campbell 2012).

There were 11 articles collected from the ECOTOX database in April 2016 related to diazepam. Ten of the articles were related to aquatic life. Diazepam has shown to affect behavior and inhibit regeneration in plants. The most sensitive group for diazepam are freshwater polyps.

Reported effects of diazepam from toxicity literature in the ECOTOX database (as of April 2016)

Aquatic Life	Reported Most Common effect(s)	Reported Common study endpoints	Reported Toxicity Values (LOEC, NOEC, EC50, LC50)
Fish	Reduced yolk sac, mild anxiety, inconclusive stress behavior	Mortality, Behavior	LC50: 12.7 mg/L (Nunes 2005)
Crustacean (rotifers)	No mortality detected, LC50 increased when mixed with DMSO	Mortality	LC50: 12.16 mg/L (Nunes 2005)
Freshwater Polyp	Inhibited regeneration	Chronic, Acute	Inhibited growth at 10 mg/L (Pascoe 2003)
Algae	Lethal effects that alters pregnancy were not found in environmentally relevant concentrations.	Growth inhibition	IC50: 16.46 mg/L (Nunes 2005)

Kruidering-Hall, M. and L. Campbell (2012) Skeletal muscle relaxants *in* B.G. Katzung, S.B. Masters, A.J. Trevor, 12 Eds. Basic and clinical pharmacology. McGraw Hill. New York, NY, pp. 476